

LA-UR-21-23871

Approved for public release; distribution is unlimited.

Title: E-Student Welcome

Author(s): Irish, Michele Marie

Tuggle, Kristopher Scott Gould, Pennie Jo

Intended for: **E-Division Student Orientation**

Issued: 2021-04-21



E Student Welcome

Meeting etiquette

Audio

Join from a quiet place

Background noise can mean participants may struggle to hear you clearly, so be aware of your surroundings and try to join from a quiet location. This is especially important if you are the host.

Use the right headset

The best audio experience is achieved with a good internet connection and a USB headset, which you can usually request from your IT department. Ear buds can be used but tend to pick up a lot of background noise, so are not recommended. The right headset can make a huge difference to your Webex Meetings experience.

Tip: When using a headset, place the microphone in front of your chin, not in front of your mouth, to avoid heavy breathing sounds.

Mute yourself

Muting your line will prevent unwanted sounds from your environment disturbing the meeting. Sounds such as typing, breathing and background chat are usually more audible to other participants than you realize.

Have one audio source

If you are planning to join a Webex meeting from the same meeting room as another participant, it's best for everyone to join the web part of the meeting individually for video and screen sharing. However, only one audio connection should be made to avoid feedback and echo.

Video

Be mindful of your background

When joining a Webex meeting from home or a busy office, try to have a clear background behind you to avoid distractions for other participants.

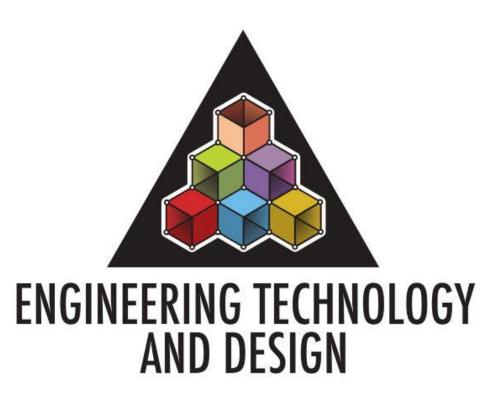
Use one webcam

When joining a Webex meeting as a group from a meeting room (if all participants aren't able to join the web part of the meeting using their laptops), ensure the video camera is directed at the whole room rather than an individual. This makes it easier for others to follow the discussion.

E Division

Engineering Technology and Design

Summer Overview



Jay Carnes, Division Leader

Brandon Lattimore Deputy Division Leader

Sheila Brandt,
Staff Operations Manager

4/19/2021

Topics



- Welcome Students
- Introductions
- Thanks to Our Mentors
- Brief Overview of W/Q **Divisions**
- Safety/Security
- End-of-Summer Documentation and **Presentations**
- Summary / Q&A

We come from all over the country to be here!





















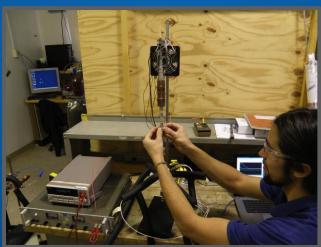
E Continues the Tradition of Mentoring Students and Early Career Staff









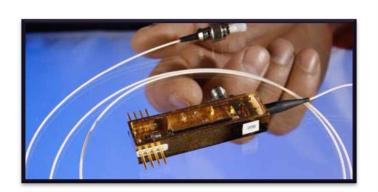


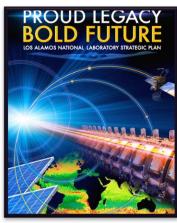


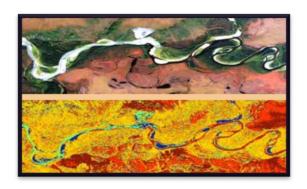
Student Programs Continue to Be the Pipeline to Our Future Workforce

Los Alamos National Laboratory 4/19/2021 | 5

LANL Dream-The Why!







E Division personnel are the premier weapons engineering solution providers for national security challenges.

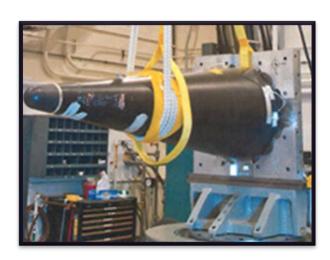




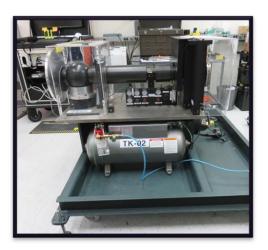


Mission Statement-The How!

E solves today's national security challenges through innovative application of engineering principles, while stewarding and expanding LANL's engineering capabilities to assure answers for tomorrow's evolving threats.







LANL is the design laboratory for the majority of the Nation's on-alert deterrent

- LANL has design and stockpile maintenance for four Nuclear Weapon Systems (W Division)
 - B61-3,4,7,10,11
 - W76-0/Mk4 and W76-1/Mk4A
 - W78-0/Mk12a
 - W88-0/Mk5



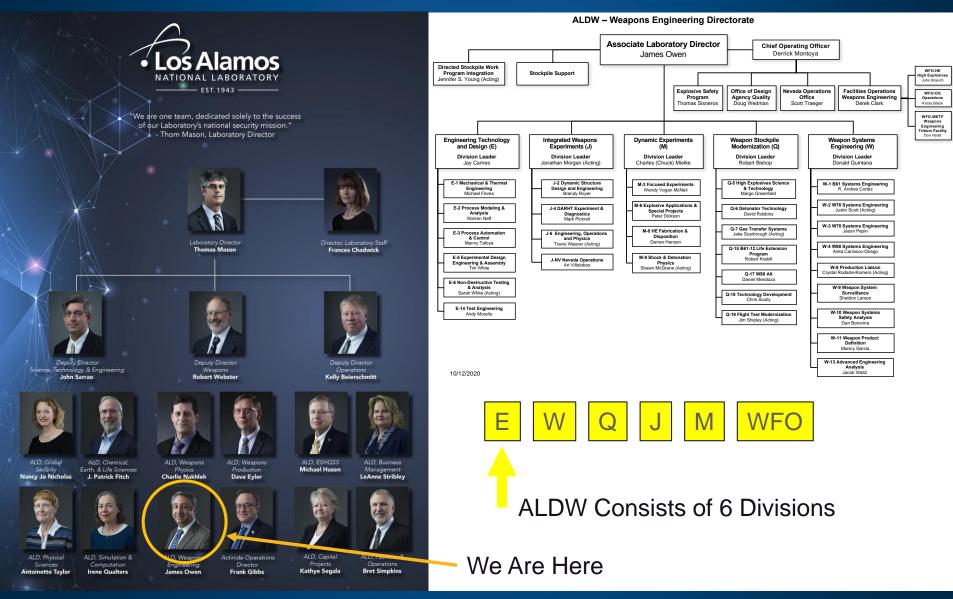




- W and Q Divisions are working on Life Extension Programs (LEP) for several weapon systems
 - W76-2/Mk4A currently in production
 - B61-12 LEP currently in design and development
 - W88 Alt 370
 - Long Range Stand-off (LRSO) Cruise Missile Feasibility Evaluation (W80-4)



LANL Org Chart



E Org Chart

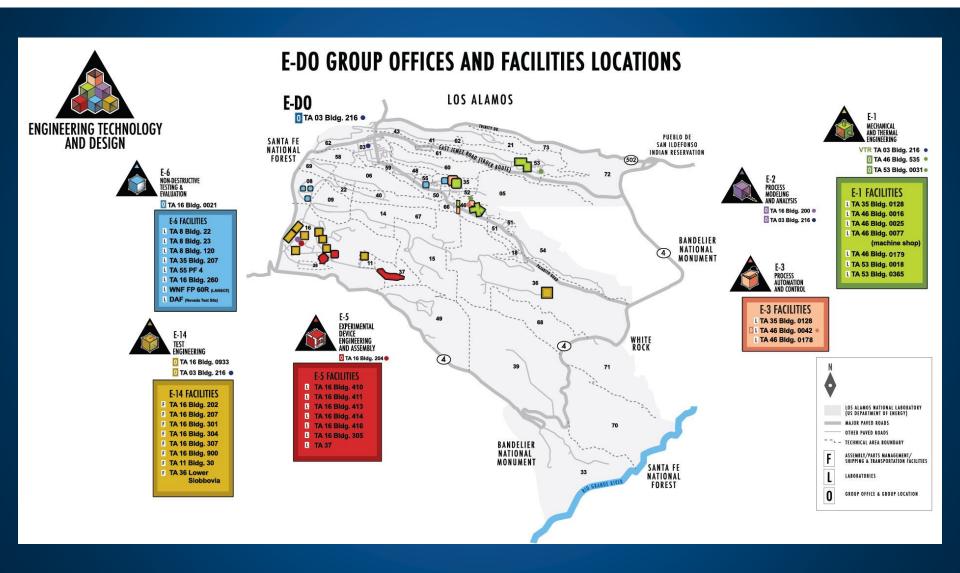
Engineering Technology and Design Division (E)



Where Does ALDW Fit into the Lab Agenda?

SIMULTANEOUS EXCELLENCE	I. NUCLEAR SECURITY	II. Mission-Focused Science, Technology, and Engineering	III. MISSION OPERATIONS	IV. COMMUNITY RELATIONS
Strategic Objective (10–20 years)	Excellence in Nuclear Security	Excellence in Mission-Focused Science, Technology, and Engineering	Excellence in Mission Operations	Excellence in Community Relations
Critical Outcomes (5–10 years)	Design, produce, and certify current and future nuclear weapons and reduce the global nuclear threats	Deliver scientific discovery and technical breakthroughs that support DOE and NNSA missions	Execute sustained operations that are reliable and responsive to mission needs	Sustain and enhance LANL's partnership with the community across the Northern New Mexico (NNM) Region
Major Strategic Initiatives (1–5 years)	 I.1. Execute LANL's Manufacturing mission to deliver 30 plutonium pits per year I.2. Transform nuclear weapons warhead design and production I.3. Anticipate threats to global security; develop and deploy revolutionary tools to detect, deter, and respond I.4 Achieve First Production Unit (FPU) and Last Production Unit (LPU) for the W88 ALT 370, B61-12 LEP, and ALT 940 	ECSE->DMMSC and related capabilities II.3. Advance the frontiers of computing to exascale and beyond	 III.1. Achieve culture change with an emphasis on organizational learning III.2. Improve integrated planning across priority mission activities and infrastructure III.3. Address critical issues related to NMC&A, nuclear safety, criticality safety, and waste III.4. Implement systematic process improvement to drive increased rigor and efficiency in work execution III.5. Enhance quality of work life, workforce planning, and training and development 	

E Facilities Locations at LANL



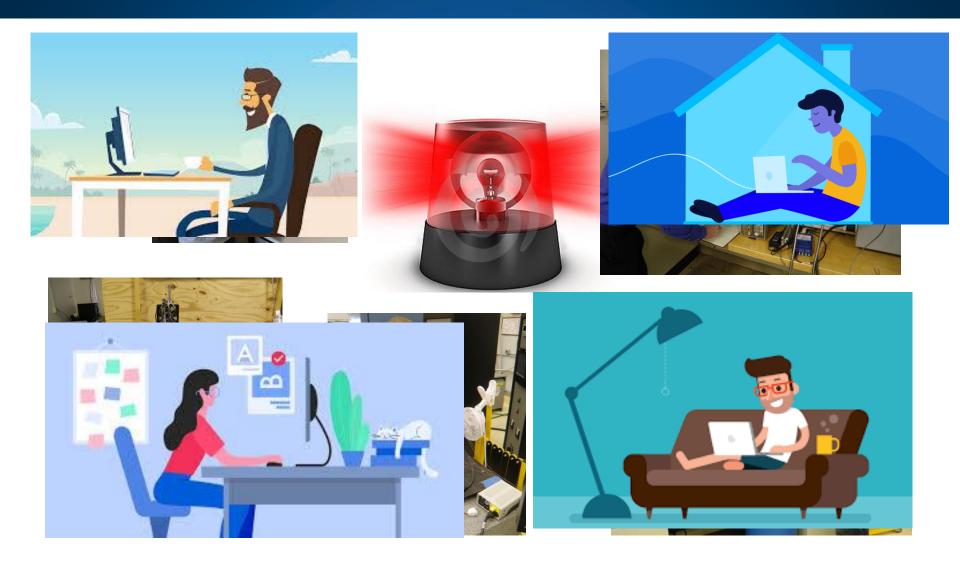
Los Alamos National Laboratory 4/19/2021 | 12

Security

Kris Tuggle, DSO 505-665-9159 (work) 505-412-2582 (cell) ktuggle@lanl.gov

Los Alamos National Laboratory 4/19/2021 |

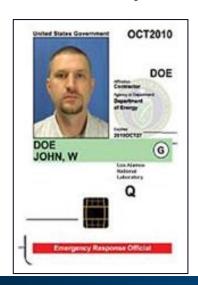
Students in the Work Areas

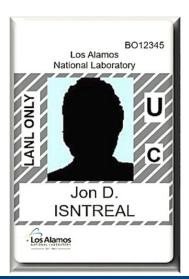


Badges

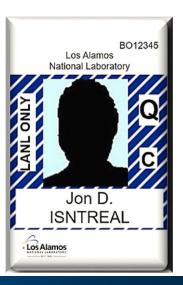
All employee's, including students, are required to wear a LANL identification badge when on LANL property.

- You must wear your badge above your waist and with your picture visible.
- Use the badge as a means of identification for official government purposes only.
 - Never photograph or photocopy.
- Never wear your badge offsite in public view.
- Report lost or stolen badges to the Badge Office within 24 hours or the next business day.









Escorting

Visitors to security areas, remember:

- Leave all controlled PEDs behind (lock box, or your vehicle)
- The maximum, permitted ratio of visitors to escort is: 5-to-1
 - Escorting ratio must not be exceeded
- Ensure that you, as a visitor, are wearing the badge visibly and appropriately
- Remain with your escort at all times; the escort must maintain visual and aural contact with visitor(s) at all times
- As a visitor, your escort is authorized to hand you off to another qualified escort if needed

Remember:

If an employee has a CANNOT BE ESCORTED Badge, they cannot be escorted into any security area. \longrightarrow

Also, FYI – in the near future, LANL will begin issuing new uncleared HSPD-12 badges. The badge will display a $\bf U$; the badge will be in an orange carrying case, & have an attached shirt clip displaying $\bf U$

Piggybacking and Tailgating is Prohibited in all LANL Areas

What is Piggybacking?

Knowingly allowing someone enter an area without using the automated controls (such as badge readers or palm readers).

 Badge reader issues could be due to expired training or and administrative issue intended to limit access.

What is Tailgating?

Unknowingly allowing someone to enter an area without using automated controls.

 Ensure all doors close behind you when entering a secure or limited access area.





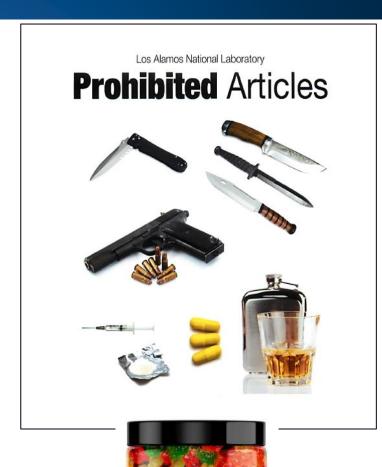
Prohibited Articles on LANL Property

A Prohibited Article is defined as: "Any weapon, explosive, or other instrument or material that is likely to injure or damage people or property.

- Nongovernment-owned firearms.
- Dangerous weapons and explosives
 - Includes pocket, hunting, or other sharp knives with blades longer than 2.5 inches.

Note: This requirement does not prohibit workers from possessing knives for official Laboratory work or fixed blade knives longer than 2.5 inches to be used in the preparation of food.

- Alcoholic beverages.
- Controlled substances (for example, illegal drugs and associated paraphernalia, but not prescription medication).
- Drones UAV
- CBD oil, products
- Items prohibited by local, state or federal law.



Controlled Portable Electronic Devices (PED)

A Controlled PED is defined as "a device that is easily portable, and can store, read, write, record, and/or transmit information."

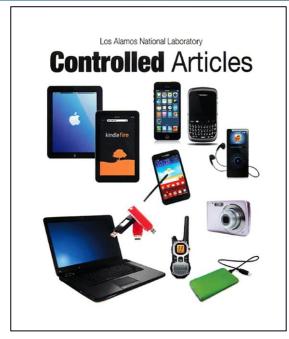
✓ Always check with your mentor about access rules.

Examples:

- Cell phones and smart phones;
- Cameras
- Smart watch:
- Laptop or tablet computers:
- Portable storage devices, such as external hard drives, flash memory and Universal Serial Bus (USB) memory device (i.e., thumb drive, memory stick, jump drive).
- Fitness trackers with Bluetooth, USB, or other connect, transmit capabilities (Exception: Specific Virgin Pulse pedometers are LANL approved and allowed)

Building access rules VARY regarding personal and LANL-owned PEDs

- Open areas (e.g. Research Library) Allowed
- Property Protection areas (e.g. Otowi building) Allowed in some areas (i.e., cafeteria vs. office areas) check policy
- Limited Security areas (e.g. NSSB) Personal PEDs NOT allowed & additional rules apply for LANL-owned PFDs



Reporting Security Concerns Over the Phone

Working-from-home:

To self-report if you download (non-LAUR) a LANL document to a personally owned computer:

- Contact your deployed security officer (DSO), Kris Tuggle at 665-9159 or 505-412-2582
 - ✓ When contact is made, only state: "I'm a summer student. I downloaded a doc."
 oThe DSO will make additional inquiries, if needed.

_

Onsite:

To self-report if you introduce a portable electronic device (PED) into a security area:

- Contact your deployed security officer (DSO), Kris Tuggle at 665-9159 or 505-412-2582
- √ When contact is made, only state: "I'm a summer student. I introduced my personal cell phone into a security area".
 - The DSO will make additional inquiries, if needed.

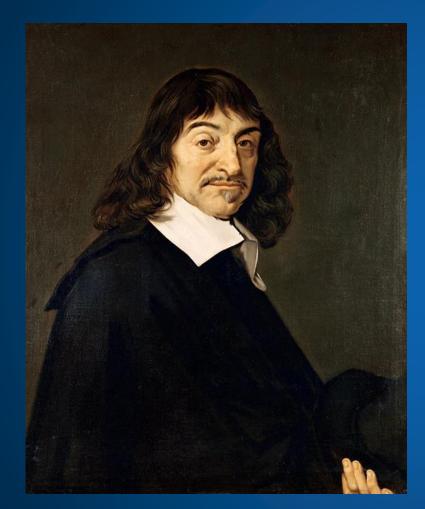
--

The best rule-of-thumb to adhere to is: say as little as possible. Let the DSO guide the inquiry through questioning.

Safety

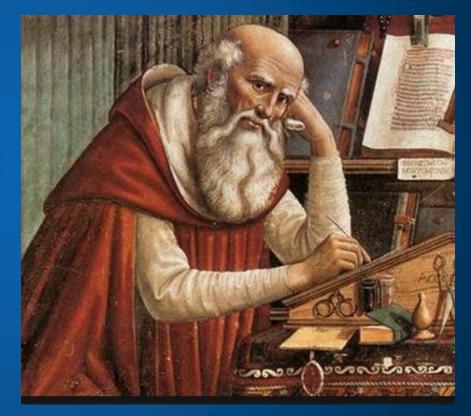
Los Alamos National Laboratory 4/19/2021 | 21

E Safety Culture-Capacitance and Confidence for Safety-Human Performance Improvement



Cogito Ergo Sum

1200 years earlier.....St. Augustine wrote



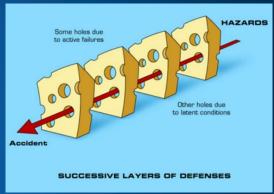
Fallor Ergo Sum

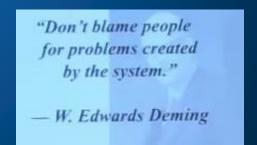
Los Alamos National Laboratory 4/19/2021

E Safety Culture-Capacitance and Confidence for Safety

 Safety is not the absence of accidents, it is the presence of defenses

- If there is an upset we want to fail safely
- Workers complete the design and procedures
- HPI, HOP, New View, Safety Differently, Resilience Engineering and
 - Todd Conklin, Sid Dekker, Erik Hollnagel, James Reason
 - Bottom Up
 - Training on student calendar
- Different from the "old view" or Safety 1
 - Top Down
 - Name, Blame and Shame





Los Alamos National Laboratory 4/19/2021 |

HPI Examples: Color Coded Quick Disconnects



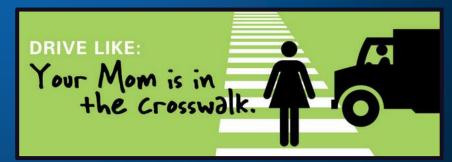
Los Alamos National Laboratory 4/19/2021 | 2

Five things on the HPI watch list-Safety

 Placing bodies (or body parts) in the line of fire-lessons learned from O2 Monitor and LANSCE Magnet

- Using force in a safe way
- Rushing (going slow is faster than crashing)
- Wearing the correct PPE when necessary
- Vehicles (seat belts, texting, phone use, speeding, prohibited articles)



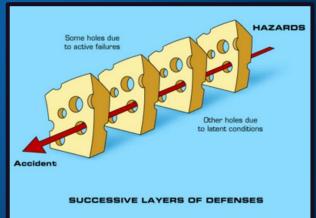


Los Alamos National Laboratory 4/19/2021

LOSA 8 Principles

- Everyone is personally responsible for ensuring safe and secure operations.
- Leaders value the safety and security legacies they create in their discipline.
- Staff raise safety and security concerns because trust permeates the organization.
- Cutting-edge science requires cutting-edge safety and security.
- A questioning attitude is cultivated.
- Learning never stops.
- Hazards are identified for every task every time.
- A healthy respect is maintained for what can go wrong.





Los Alamos National Laboratory 4/19/2021

Student Guidelines (Safety and Security)

- Know and work to your "work plan"
- Let mentors, admins, FLMs, and group leaders know where you are at all times
- TPs/IWDs for Moderate and High Hazard work in the Labs
 - √ P300-1 IWM for R&D
 - ✓ Training
 - √ Pre-job Briefs
 - ✓ Sign the TPs/IWDs
- Low Hazard Work-What should you do?
- Working alone?
- Stopping and Pausing Points
- Protective Personnel Equipment (PPE)



Students Guidelines (Safety and Security)

- Know and work to your "work plan"
- Let mentors, FLMs, and group leaders know where you are at all times
- TPs/IWDs for Moderate and High Hazard work in the Labs
 - ✓ Training
 - √ Pre-job Briefs
 - √ Sign
- Low Hazard Work-What should you What is the most important do?
 thing you should be
- Working Alone
- Stopping and Pausing Points
- Protective Personnel Equipment (PPE)



working on right now?



Whatever your supervisor just asked you to do!

Students Guidelines-COVID Hub

https://int.lanl.gov/news/news_stories/2020 /covid-19/covid-19-hub.shtml

Online resources: Returning to work on-site

The internal COVID-19 webpage has been updated with a new Resources for On-site Work section to further explain and clarify how we will be carrying out work for what we anticipate will be an extended period of time.

READ MORE















https://int.lanl.gov/computing/networkconnectivity/remote-access/telework/students.shtml

Student Telework Resources

Connecting to LANL networks from offsite

LANL's protected (Yellow) network and network resources are accessible from offsite via the Lab's Virtual Private Network (VPN), authenticated web access and Remote Desktop Protocol (RDP) to physical and virtual systems.

Know before you connect!

LANL networks are authorized to operate by the National Nuclear Security Administration (NNSA). You are responsible to know and abide by the rules and regulations governing the use of LANL's networks and resources.

Before you attempt to connect to any LANL network, please read through the following resources to understand remote access rules and policies:

- Telework Policy Aid (pdf)
- Telework FAQs
- Telework Quick Tips
- Policy 204-1, *Controlled Unclassified Information* (pdf)
- Policy 218, Cybersecurity Controls (pdf)
- Policy 225, Protecting Electronic CUI (pdf)
- Policy 226, External Vendors, Subcontractors, and Cloud Services (pdf)
- Cybersecurity
- Information Protection

CRYPTOCard - Your authentication to the network

You need a z-number, CRYPTOCard and PIN to authenticate (i.e. "login") to the LANL network. Instructions for using the CRYPTOCard should have been provided when you received the card. Contact your mentor if you don't have or don't know any of the three things listed above.



Note, a PIV badge or zToken and reader will also work for authentication if you have them.

https://int.lanl.gov/employees/healthwellness/employee-self-care.shtml Employee Self-Care

Teleworking and Wellbeing Resources

Ergonomic Telecommuting

- A Guided Approach to Setting up Your Workstation at Home
- Ergonomic tips for telecommuting (pdf)
- Setting up your chair for telecommuting (pdf)
- Stretch Break Reminders for body and eyes (pdf)
- Stretches (pdf)
- How to clean your ergonomic keyboard and mouse (ppt)
- Laptop ergonomics for adults and kids working from home
- Ergonomic computer self-setup guide
- Injury Prevention (pdf)





Injured while Teleworking

Reminder : Work related Injuries and illnesses that occur while an employee is teleworking should be reported to first line managers and to Occupational Health at 667-0660. Work related injuries are directly related to the performance of work vs. the general home environment or setting.

P102-2 Occupational Injury and Illness Reporting and Investigation (pdf)





Safety at Home While Teleworking



While we may not usually view our homes and workplaces as the same environment, many of us have now transitioned into teleworking.

Both environments have their share of safety hazards, now those safety hazards have been combined with a new set of changes such as family members, pets, and dual functioning workspaces. While the goal is to be productive at home, safety should be what builds the foundation to a productive work environment. The following are some safety checks to perform in your home office space:

- Is my office chair and furniture ergonomically correct?
- Do I have a plan set to take micro breaks from my computer?
- Are my walkways and floor areas clutter-free and safe?
- Are there spills, tiny toys, or anything I may not see at first glance?
- Do my smoke detectors work?
- · Do I have working carbon monoxide detectors?
- · Are my family and I prepared for a fire?
- Do I have a fire extinguisher?
- Are electrical cords safely plugged in and tucked away?
- Am I trying to multitask home/ office deliverables, does this pose any hazards?
- Do I have first aid supplies?
- What would be my plan of exit if there was an emergency? Have I communicated this to my family in the home?
- Do I have a surge protector?
- Do I have proper lighting and ventilation?
- There are also thoughts that surround cyber security and security of work files. Are work files backed up and stored to ensure their safety in case of fire or damage?

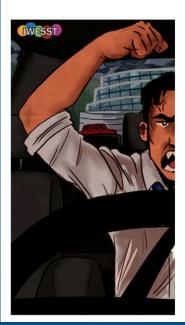
No matter where you may find yourself working, safety is always critical to both you and your employer's success and well-being. Take the time to take care of yourself and your family.

Worker Environmental Safety and Security Team



- E-1: Lesia Luviano
- E-2: Jerrad Auxier
- E-2: Jeff Hyde
- E-3: Erin Sosebee
- E-3: Bryan Steinfeld
- E-5: Matthew Montoya
- E-5: Jimmy Vigil
- E-6: Adam Martinez
- E-6: Allison Martinez
- E-14: Caleb Schelle
- E-14: Skyler Chavez

Drive Safely Campaign





Are you concerned about the commuting, driving, cycling and pedestrian conditions around the Laboratory? Recent reports of drivers barreling through red lights in front of Hot Rocks and bicycles being buzzed by passing motorists have Lab commuters nervous on the roads and sidewalks. The goal of the Drive Safely Campaign is to increase safe driving practices around the Lab and to encourage employees to watch out for their coworkers while at work and on the way to and from home. The campaign will post awareness reminders like banners and posters across the Lab, and plans to hold awareness events.

Los Alamos National Laboratory 4/19/2021

Electrical Safety Officers (ESOs)



Electrical Safety Officers (ESOs)

Scott Semanision, Division ESO, E-3
George Montano, E-DO
Joel Joseph, E-3
Tim Renshaw, E-3
Richard Romero, E-3
Marwan Mohamed, E-3
Cornelio Lopez, E-5
Kirk Webber, E-14

Mentors

- For students doing electrical work
 - Training
 - · Meet with ESO
- Ensure they understand what equipment is ok to use
- Electrical Safety Challenge Is your equipment safe?





















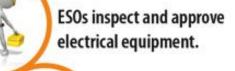








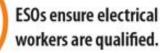
What can your ESO do for you?

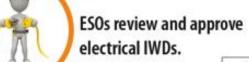




ESOs perform walk-throughs of work areas.

ESOs consult, assist, and facilitate safe electrical work





Get to know your ESO



Trouble Spots

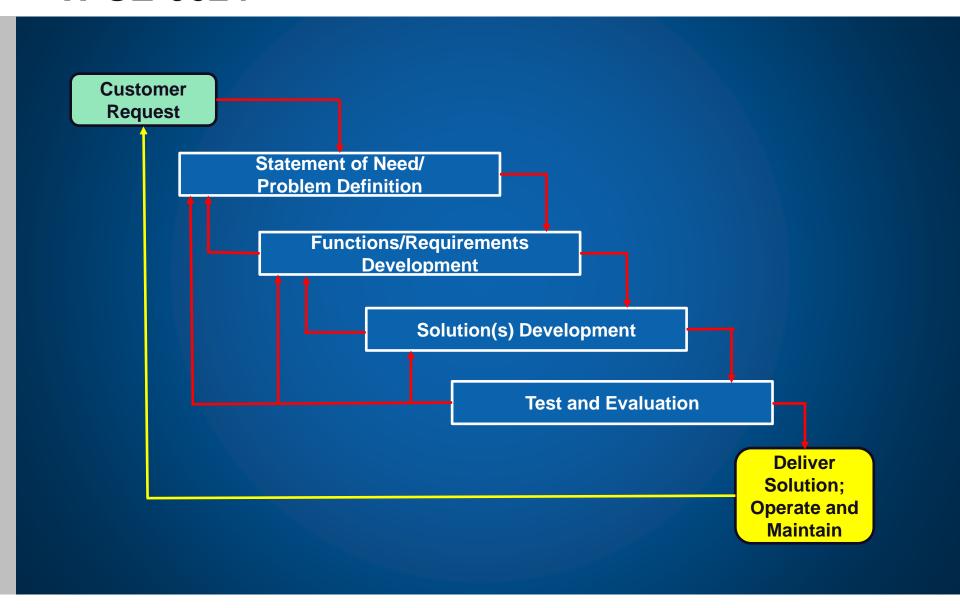
Misuse of government resources

- ✓ Includes: government vehicles (trackers), use of government phones, cell phone usage, time and effort reporting, internet usage, copiers, etc.
- ✓ Memo on February 7, 2017, LANL has a zero tolerance policy

Availability to work

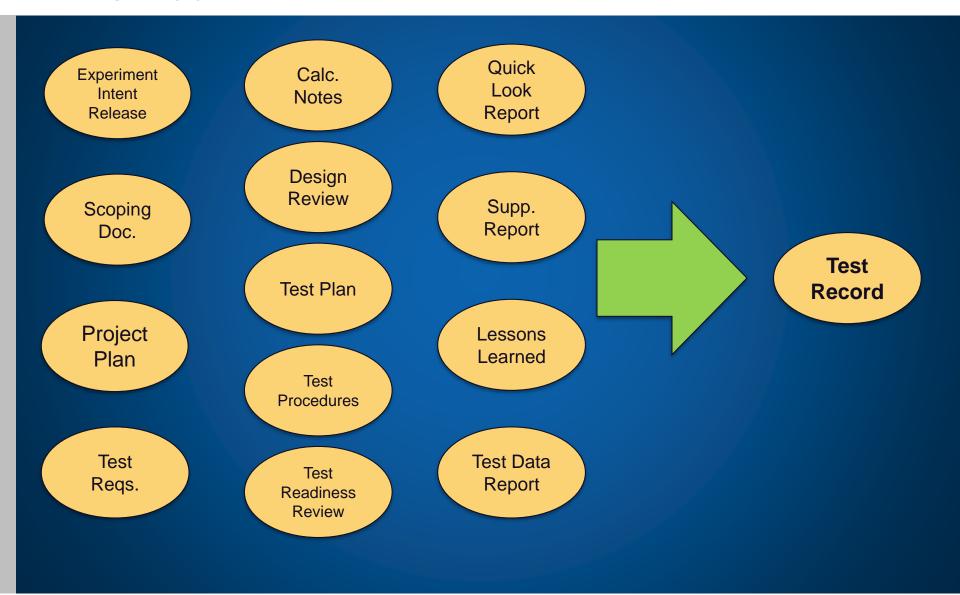
- ✓ Make sure that you understand the rules hours of work, lunch break, sick day reporting, vacation time for casuals, let your mentor know if you will be out of the office, we have an out of office calendar in Sharepoint:
- ✓ https://ade.lanl.gov/W/SitePages/WDivision.aspx
- All students are subject to random drug testing this summer you might get called
- Avoid the discussion regarding appropriate work attire

Conduct of Engineering for R&D (PD370) and W-SE-0024



Los Alamos National Laboratory 4/19/2021

W/Q Templates that Align with PD370 and W-SE-0024

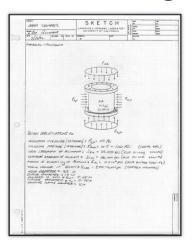


Los Alamos National Laboratory 4/19/2021 | 3

End-of-the-Summer Presentations and Close Out (Begin with the End in Mind)

- Each student will be asked to give a presentation at the end of the summer. It is an opportunity to present what you did over the summer at IANI
- Summarize your body of work in a "test record" (requirements, reports, calculation notes, procedures, scan of logbook, etc.)







- E Webex or LANL Student Symposium "Celebrating Student Achievement" (TBD) in August
 - ✓ WEBEX/technical talk to present your work
 - ✓ To be held in early August

Things tend to move slowly here but please do not get frustrated!



Final Words

- Our desire is for every employee to have a positive experience working in E Division
- Communicate regularly (daily) with your supervisors
- ✓ Be patient but persistent
- Be <u>safe</u> and <u>secure</u> in everything you do!
- If you have any concerns going forward, contact your mentor or **Group Leader**
- ✓ Or you can contact Sheila, Michele, and Pennie in the Division Offices 667-5400 or Jay & Brandon too!





Questions?

